

CONFIDENTIAL

File Rocket Leaflet

50X1

## PROGRESS REPORT

FOR

MAY 1956

ON

4-INCH ROCKET

ORIGINAL CLEV 235919  
☐ DECL ☒ REV 2010  
 EXT BYND 6 YRS BY SAME  
 REASON 3 d (3)

DOC <u>23</u>	REV DATE <u>29 MAY 1980</u>	BY <u>018373</u>
ORIG COMP <u>56</u>	OPI <u>56</u>	TYPE <u>03</u>
ORIG CLASS <u>M</u>	PAGES <u>3</u>	REV CLASS <u>C</u>
JUST <u>22</u>	NEXT REV <u>2010</u>	AUTH: HR 10-2

1210-E-1

for  
 Loggs  
 6/26/52

June 20, 1956

CONFIDENTIAL

Considerable effort was spent in May converting the rocket for the use of  $1\frac{1}{2}$ " tubing. Three grains of propellant can be placed side by side in this size motor tube, thereby shortening the length of the tube needed. Because of the larger end area of this size tube, nozzle blowouts were experienced in static tests. This difficulty was overcome by reinforcing the end of the tube so that the tube wall would experience less flexing. In addition, a lower Kn value was used, resulting in a lower operating pressure.

Molds were designed and fabricated in which to form ogives and base sections similar to those planned in a production model. Following successful static tests of the  $1\frac{1}{2}$ " tubing, flight models were constructed, using a plastic ogive and base cap, a split cardboard body tube,  $1\frac{1}{2}$ " motor tube, and delta shape fins attached by gluing and banding. A time fuse was devised for the unit, not so much to design the fuse train as to study the effects of quantity and placement of bursting charge on an air burst. Six models were tested with complete success as to flight, although the fuse employed produced poor timing due to its inherent inaccuracy.

Static tests of payload distribution were made from a tower thirty feet tall. These tests were made using one to three layers of leaflets with a cardboard separator disc between the leaflets and the black powder burster. A 40 gm. charge of black powder gave very good distribution, the leaflets being ejected 30 to 35 feet vertically. The effect of the high velocity through the air would, of course, give much better scattering in an in-flight burst.

#### Future Work

Further tests will be made of leaflet packing methods and more static leaflet burster tests will be made. Additional refinements in the design of the 1,000 meter model will be made and if possible, flight tests will be made using the prototype delay fuze train.

Static tests of the 3,000 meter model will be made and flight tests of this model will be made at zero angle towards an earth covered hillside at a distance of 100 feet.

CONFIDENTIAL

Financial Statement

Total Amount of Contract (Phase II)

Obligations for May, 1956

Total Obligations to May 31, 1956

Balance of Contract

Expiration Date - June 30, 1956

50X1